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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,792	02/14/2001	Keiji Sakata	36856.449	9594

7590 06/01/2004

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EXAMINER
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NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application N .

09/782,792

Applicant(s)

SAKATA, KEIJI

Examiner

TUYEN T NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meadors et al. [US 6,249,205] in view of Yamasawa et al. [US 6,140,902].

Meadors et al. discloses a multi-layer inductor [see previous office action].

Meadors et al. discloses the instant claimed invention except for each coil conductor pattern on the main surface of the plurality of the magnetic layers is in a range of about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers.

Yamasawa et al. discloses a multi-layer device comprising:

- a plurality of magnetic layers [3];
- a plurality of coil conductor patterns [6] formed between the plurality of magnetic layers;
- at least one nonmagnetic component [4] disposed in the vicinity of the plurality of coil conductor patterns in the plurality of magnetic layers.

wherein the coil conductor pattern on the main surface the plurality of the layers is in a range of about 35% to about 75% of the area of the main surface of the respective ones of the plurality of layers.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the coil conductor pattern design of Yamasawa et al. in Meadors et al. for the purpose of improving usage of the area of the conductive material and minimizing leakage inductance.

Regarding claim 5, the specific shape of the magnetic layers would have been an obvious design consideration based on the intended application use.

Regarding claim 7, Meadors et al. discloses an air gap [space] or cavity disposed inside one of the plurality of coil conductor patterns [figure 2]

Regarding claims 6, 8 and 9, Yamasawa et al. discloses the conductor patterns can be in any shape of meander and a combination of spiral [column 3, lines 40-44].

Regarding claim 10, Yamasawa et al. discloses the coil conductor patterns width can be in the range from 0.2mm to 1.0mm [column 9, lines 57-65]

#### ***Response to Arguments***

Applicant's arguments filed 2/25/2004 have been fully considered but they are not persuasive.

Applicant argues that:

1] The relationship taught by Yamasawa et al. contains many values outside the claimed range of about 35% to about 75%; and

2] There is no motivation to combine Meadors et al. with Yamasawa et al.

The examiner disagrees.

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Regarding [1], as acknowledged by applicant, Yamasawa et al. discloses the claimed relationship [applicant's arguments, paragraph 3, page 7]. Applicant has not disclosed, or claimed, any specific parameters as to the specific range of values.

Regarding [2], in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamasawa et al. teaches that the conductor size is used to optimize the inductor Q value.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Elvin Enad, can be reached at (703) 308-7619. The fax number for this Group is (703)872-9306.

Any inquiry of a general nature or relating to status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

TTN *TTN*

May 31, 2004

*Tuyen T. Nguyen*